

## REMARKS

This paper is filed in response to the final Office Action mailed August 4, 2005. Reconsideration of this application is respectfully requested. Claims 1-39 remain pending; claims 40-41 were previously cancelled in response to the restriction requirement. Claims 1, 31, 32, 33, and 38 are independent.

The Office Action rejects the claims as unpatentable in view of Smith (U.S. Pat. No. 6,853,982), alone or in combination with other references. The four independent claims have been rejected as anticipated by Smith, and Applicant notes that following Applicant's previous remarks, the Examiner has not continued the prior rejection of the independent claims in view of Fish (U.S. Pat. No. 6,035,294) or Wical (U.S. Pat. No. 6,038,560).

Applicant will focus this discussion on claim 1, which relates to a method for searching a collection of items, wherein each item in the collection has a set of properties. The claim refers to three sets of properties, in which a query has a first set of properties; an item in the collection has a second set of properties; and a third set of properties is determined. The "third set of properties" is the properties "common to the first set of one or more properties and the second set of one or more properties."

A result is obtained by applying a distance function that determines a distance between the query (with its first set of properties) and the item in the collection (with the second set of properties). The distance is based on "the number of items in the collection that are associated with all of the properties in the third set of properties." Because the "third set of properties" is the set of properties common to the query and the item, the distance function considers how many items in the collection *in addition to the item with the second set of properties* also have all of the common properties (that is, the properties common to the query and the item with the second set of properties). Thus, the distance function is not based simply on the number of common properties (either in absolute terms or relative to the number of properties associated with the query and the item). Rather, the distance function is based on considering how many other items also share the common items. In simple terms, the claimed distance function determines a distance between a query and an item (or between two items) based on how common it is for items to share the properties that the query and the item share.

In the Office Action, with respect to claim 1, Applicant understands the Examiner to be making the following comparison:

Claim Element	Smith Reference
Set of properties	Set of sessions
Query	One (or more) query log records
Item in the collection having a second set of one or more properties	An item (such as a popular item) and the sessions in which it was viewed
Third set of properties	The sessions in common between the query and the popular item
Distance function	???

Applicant is not sure what the Examiner is treating as the distance function. Smith provides, as an example of its Commonality Index, Equation 1 (from column 18, as modified at column 19, lines 20-28):

$$CI(\text{item\_A}, \text{item\_B}) = N_{\text{common}} / \sqrt{N_A * N_B}$$

where  $N_{\text{common}}$  represents the number of sessions in which A and B were viewed,  $N_A$  represents the number of sessions in which A was viewed, and  $N_B$  represents the number of sessions in which B was viewed.

This function is very different from the claimed "distance function." Regardless of what portion of the set of sessions is treated as the query (and therefore the item\_A of the CI equation), the equation looks only at the sessions involving A, B, and both A and B. The equation does not look at (and nothing in the Smith reference teaches or suggests to look at) the number of **other** items in the collection (items C, D, etc.) that also are associated with the sessions in which items A and B were viewed (the common sessions,  $N_{\text{common}}$ ). To teach or suggest the claimed distance function, the Smith reference would need to teach a commonality index or some other calculation based on the number of items for which the set of sessions for

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the item includes all of the sessions in the set of common sessions. However, Smith has no such teaching.

The other independent claims have similar requirements.

Accordingly, claims 1-39 are believed to define allowable subject matter over the art of record. Reconsideration is earnestly solicited. If there are any remaining issues, the Examiner is urged to contact the undersigned at the telephone number listed below.

The Commissioner is authorized to charge Deposit Account No. 08-0219 for a one month extension of time to respond and for any other fees that may be due in connection with this paper.

Respectfully submitted,

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